DOCUMENT RESUME

ED 291 879 CE 049 592

TITLE Promotion of Cooperation among Research and Development Organizations in the Field of Vocational Training. Scenario of the Vocational Training Systems in the Federal Republic of Germany to 1995.
PUB DATE 86
NOTE 13p.
PUB TYPE Viewpoints (120)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Economic Factors; *Educational Needs; *Educational Trends; Foreign Countries; *Futures (of Society); Long Range Planning; *Needs Assessment; *Technological Advancement; *Vocational Education
IDENTIFIERS *West Germany

ABSTRACT

A forward-looking scenario for the vocational training system extending to the year 1995 is composed of two parts. The first comprises a forecast, with both optimistic and pessimistic variants, relating to the economic, technical, political, and demographic contextual aspects that play a major role in determining the profile of the vocational training system. The second part charts out the response paths for the vocational training system. The demand for training places is conditioned by the demographically induced decline in the number of school leavers and the marked upgrading of the importance of holding a school-leaving certificate. Only in the event of a favorable economic trend does the supply of training opportunities surpass the demand. The school-leaving certificate becomes increasingly important as a criterion for access to in-company vocational training. The prospects for meeting the needs of problem groups deteriorate. A shift occurs in in-company vocational training provision in the direction of medium and large companies and the service sector. The spread of information technology implies a considerable raising of skill requirements in many training occupations. Demands on trainers increase substantially with the need for more compact training processes based on more intensive use of training media and new learning and teaching methods. (YLB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

PROMOTION OF COOPERATION AMONG RESEARCH AND DEVELOPMENT ORGANIZATIONS IN THE FIELD OF VOCATIONAL TRAINING

ED291879

SCENARIO OF THE VOCATIONAL TRAINING SYSTEMS IN THE FEDERAL REPUBLIC OF GERMANY TO 1995

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

✓ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

H Schmidt

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

CE049592

Scenario of the Vocational Training Systems in the Federal Republic of Germany to 1995

1. Problem Context

In 1986 the Federal Institute for Vocational Training (BIBB) developed a forward-looking scenario for the vocational training system extending to the year 1995 to serve as an orientation framework for its long-term research planning. The scenario indicates that vocational training in the Federal Republic of Germany is currently at a critical point in its development. The factors which have conditioned the vocational training system over the past decade, namely,

- larger cohorts of young people,
- declining or stagnant economic growth rates,
- increasing risk of unemployment,
- changed education behaviour with more pupils holding more advanced school-leaving certificates,

have to some extent brought about a fundamental change in orientation, and in addition new aspects have entered the scene, for example:

- awareness of the vulnerability of the environment,
- increasing role of women in society,
- developments towards the age of information,
- shorter working hours and greater worktime flexibility.

Figure 1: Macroeconomic data

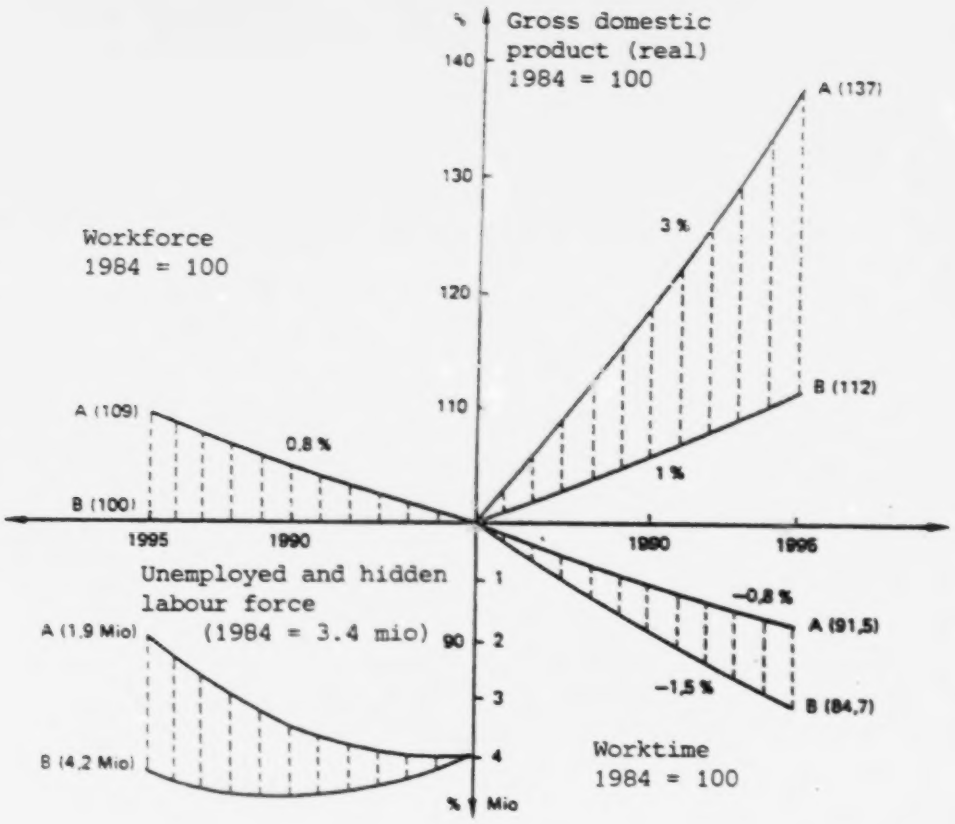


Table 1: Breakdown of school-leaver structure and training place demand

	1976	1985	1995
School-leavers graduating from general education sector	827	957	625
% from lower secondary ed.	56	41	30
% from extended secondary ed.	27	36	30
% from academic sec. ed.	16	23	40
Demand for training places			
absolute (in '000)	524	756	465 1)
as % of row 1	63	79	74

1) median value from scenario variants A and B

The scenario is composed of two parts: the first comprises a forecast - providing both an optimistic and a pessimistic variant - relating to the economic, technical, political and demographic contextual aspects which play a major role in determining the profile of the vocational training system; the second part charts out the response paths for the vocational training system.

2. Premises

2.1 Annual average real economic growth ranges between 3% in optimistic scenario variant A and 1% in pessimistic variant B. Variant A proceeds from the assumption of a moderate reduction in worktime, in variant B the assumed reduction is substantial. Taking account of the labour productivity factor, variant A indicates an increase in employment by 1995 to produce a workforce of over 27 million and a marked reduction in unemployment, whereas variant B indicates that employment will stagnate at 25 million and unemployment will be comparable with the 1985 level.

In both scenario variants the structure of the workforce, classified according to economic sector, shows changes which are aligned in direction but take place at different levels of intensity. Relative employment reductions are to be found in manufacturing industry and the construction industry, and relative employment increases are indicated for the services.

The increasing significance of the service sector will be primarily attributable to production-oriented services. The occupational structure within the workforce will change accordingly. The losers are the industrial occupations, the winners the technical, administrative and office occupations.

2.2 Vocational training in the technical field will be modified first and foremost by the implications of information technology and the technologies, processes and products developed to protect the environment. Materials technology will not change substantially between now and the year 1995.

The installed base of information technology equipment and systems will expand threefold according to the optimistic variant, twofold in the case of the pessimistic variant. From the qualitative viewpoint, the equipment will belong to a new generation. Communication technology will be digitalized by 1995 and converted to operate on the basis of fibre-optic systems. The following is particularly affected by this development:

- equipment for computer-aided process control and production logistics;
- equipment for computer-aided planning and design;
- equipment for corporate telecommunications.

Figure 2: Structure of training place demand

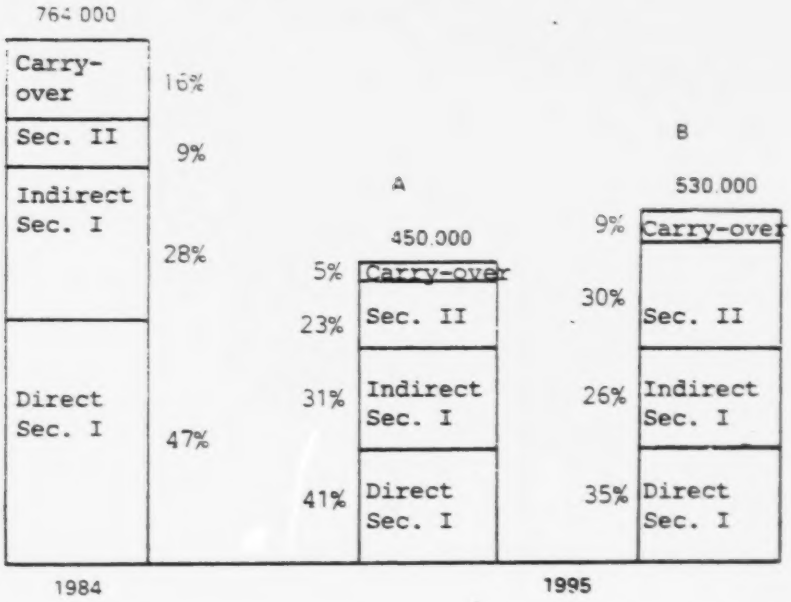
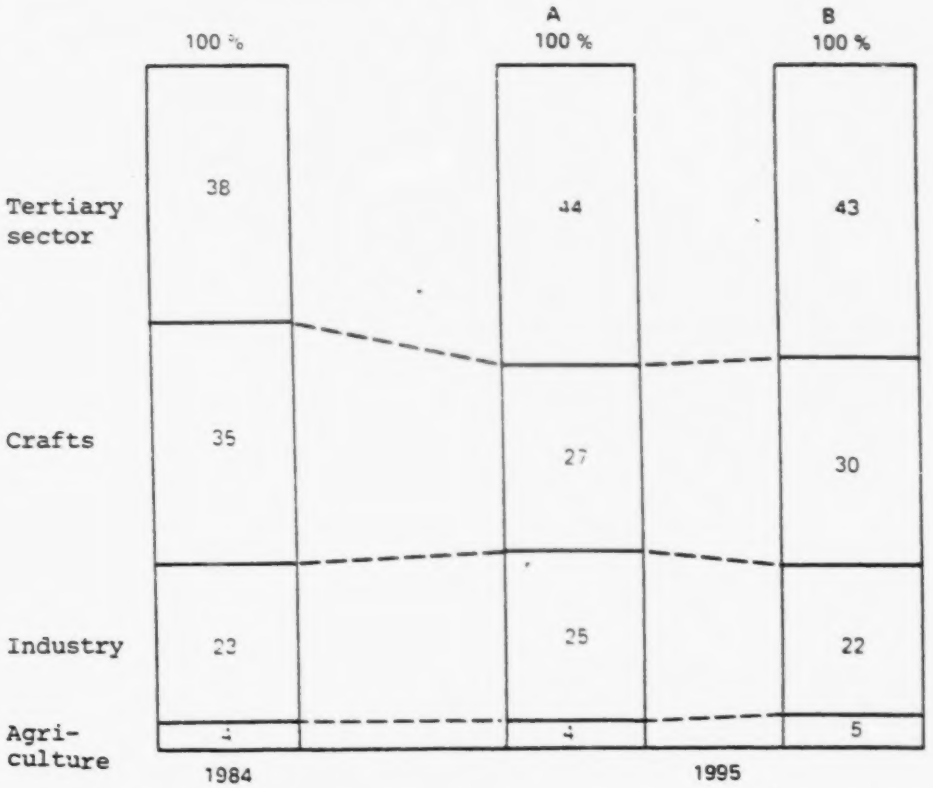


Figure 3: Breakdown of training contracts by economic branch



Toxic emission will be largely regulated by virtue of international agreements. There will be moves towards closing the link in the circuit of material flows from raw materials to waste products. Bio-organisms will be applied on an industrial scale and gene technology will be on the threshold of breakthrough. National spending on energy will increase at a disproportionately high rate. Environmental and communication infrastructure will be fields for public investment spending. The differences between the two scenario variants are negligible in these fields.

2.3 By 1995 the number of school-leavers will have declined to equal only 65% of the 1985 figure. The importance of schooling offering only the first cycle of secondary education will continue to decline. Intermediate-level school-leaving qualifications will forego the advantage they gained during the preceding decade. The proportion of school-leavers holding the "Abitur" (qualifying for university entrance) is likely to show a steep increase. The reasons for these trends are to be found in the fact that school types will be competing more fiercely for pupils. The academic secondary schools are likely to be the winners here as they are the only type offering the possibility of qualifying for technical college or university entrance.

2.4 Individual values and life quality considerations are also factors of relevance to education and training. They are largely reflected in the following trends. Women will show a continued, increasing interest in training and employment, a fact which implies more part-time work, more continuing training, and greater interest in an occupation after bringing up the children. Environmental awareness will become a predominant social factor. Less importance will be attached to conventional status symbols. The limitations to government social welfare financing will become increasingly visible, largely because of the rapid expansion in the cost of caring for the elderly. Continuing training will become an urgent necessity and will develop into a kind of new consumer article. The increase in leisure time will stimulate activity in the parallel economy. Maintaining living standards will be increasingly assured not by the market but instead by private initiative.

3. Findings

3.1 The demand for training places in 1995 will be conditioned by the demographically-induced decline in the number of school-leavers and the marked upgrading of the importance of holding a school-leaving certificate qualifying for university or technical college entrance. Only in the event of a favourable economic trend can it be expected that the strain on the training place market will diminish: only under such

circumstances will the supply of training opportunities be greater than the demand. In the pessimistic scenario variant, the converse is more likely to be the case as firms will limit the number of trainig places offered in line with the decline in demand, this to the effect that the supply/demand ratio will remain comparable with that of 1985.

Demand for training places in 1995 (1985: 756,000)
- optimistic variant: 400,000 - 450,000
- pessimistic variant: 480,000 - 530,000

Supply of training places in 1995 (1985: 719,000)
- optimistic variant: 450,000 - 500,000
- pessimistic variant: 420,000 - 470,000

The pessimistic variant shows a considerably higher carry-over demand for training places from still unplaced young people than the optimistic variant. The fraction of total trainees accounted for by non-nationals will increase from currently 3-4% to 10-12% in 1995. The most common school-leaving qualification here will be the lower secondary education certificate. The fraction of women in industrial and technical occupations (currently approx. 11%) is not likely to increase further because of the renewed attractiveness of higher education in the 1990s and also the fiercer competition for corresponding posts (many industrial and technical jobs will be at risk of being lost in the wake of rationalization schemes).

3.2 The level of the school-leaving certificate will become increasingly important as a criterion for access to in-company vocational training. This could lead to a schism in the dual system if de facto access preconditions become established and the obstacles to obtaining qualitatively attractive training places become insurmountable for those with only a lower secondary education. Medium and large firms will draw a greater fraction of their trainees from those holding the university-entrance qualification. The prospects for meeting the needs of problem groups will deteriorate (training dropouts, young people from special schools, young people with no school-leaving certificate).

3.3 A shift will take place in in-company vocational training provision in the direction of medium and large companies and the service sector. Traditional crafts (those directly or indirectly dependent on the construction industry) will play a clearly diminished role in training provision activities. The reason here, in addition to the comparatively low growth potential in the construction industry, is the deterioration in job prospects for those with a craft training. Since the larger firms will increasingly meet their skill requirements by organizing their own training and continuing training schemes, many young people with a craft apprenticeship will not be able to count on finding employment as skilled workers in industry as has traditionally been the case. An

additional factor here is the tendential reduction in the number of unskilled and semiskilled activities in the industrial sector.

The comparatively pessimistic assessment of job prospects in the craft sector for those trained in that sector must be revised upwards, however, in line with the extent to which the craft sector can successfully launch an offensive to penetrate the services sector, in particular the field of production-oriented services. The optimistic scenario variant, for example, envisages a wave of new enterprise ventures offering production-oriented services, a trend which should also benefit the craft-based metalworking and electrical engineering occupations.

3.4 The spread of information technology throughout manufacturing, commerce and the administration will imply a considerable raising of skill requirements in many training occupations. Manual skills will lose ground to intellectual abilities and universally applicable key skills (planning, decision-making, ability to work in a team, system comprehension, readiness to learn). A decisive factor for occupational success will be individual commitment to continuing training.

The demands placed on the trainers will increase substantially - because the trainees will be older and have a higher standard of school education and also because the skill requirements in training occupa-

tions, together with an effective reduction in training time linked with general worktime reduction considerations, will necessitate more compact training processes based on more intensive use of training media and new learning and teaching methods.